

NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

ISSUED: September 19, 1979

Forwarded to:

Honorable Lillian C. Liburdi
Acting Deputy Administrator
Urban Mass Transportation
Administration
400 7th Street, S.W.
Washington, D.C. 20590

SAFETY RECOMMENDATION(S)

R-79-62 and 63

On January 19¹⁷, 1979, Bay Area Rapid Transit District (BART) train No. 117 caught fire inside the Transbay Tube. During its investigation of that accident, the National Transportation Safety Board found that, because of a short in the train's control circuit, the on-board uncoupling system would not function. BART's emergency plan for tunnel evacuation of passengers from disabled trains is, first, to move the passengers from the damaged cars to the undamaged cars, then uncouple the damaged cars and move the undamaged portion of the train to a point where the passengers can be safely removed. Had this been accomplished, the passengers on train No. 117 would have been removed from the tunnel with little, if any, adverse effects. Valuable time was consumed in an unsuccessful attempt to uncouple the cars; the failure to uncouple the cars ultimately resulted in the passengers being released into the smoke-filled tunnel.

The Safety Board surveyed other rapid transit systems to determine if they used similar uncoupling systems and to determine what effect a shorted control circuit would have on their ability to uncouple cars under similar circumstances. In each of the systems surveyed, uncoupling from inside the disabled cars cannot be accomplished. In some systems, the electrical connection or the couplers can be manually uncoupled from outside the cars, and the train will separate. However, to perform this task, a person must go outside the train and get under the ends of the cars where the separation is to be made and operate the uncoupling levers. During an emergency involving fire or smoke, the operation may be difficult or impossible to accomplish.

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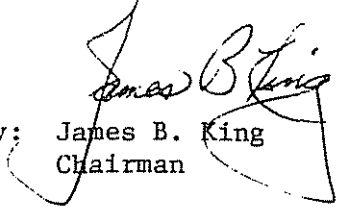
The Safety Board believes that moving passengers to the undamaged cars, separating the train, and then moving the undamaged cars and passengers out of danger is the quickest and the best approach to this type of an emergency. However, any transit system that depends on this method to evacuate passengers from tunnels must have a dependable uncoupling system and employees must be thoroughly instructed in its use.

Therefore, the National Transportation Safety Board recommends that the Urban Mass Transportation Administration:

Require those rapid transit systems that depend on uncoupling damaged cars from trains for the evacuation of passengers to redesign and modify car uncoupling circuitry to provide train operators with a positive means of uncoupling from within the cars in the event of an electrical short or other malfunction in the control circuit. (Class II, Priority Action) (R-79-62)

Require those rapid transit systems that depend on uncoupling damaged cars from trains for the evacuation of passengers to establish training programs in emergency procedures for train operators and crewmembers to insure that they thoroughly understand the method used to uncouple cars. (Class II, Priority Action) (R-79-63)

KING, Chairman, DRIVER, Vice Chairman, McADAMS, GOLDMAN, and BURSLEY, Members, concurred in these recommendations.


By: James B. King
Chairman